

**NAVAL WAR COLLEGE
Newport, RI**

**Distributed Operations: Translating Tactical Capabilities into Operational
Effects**

By

**Brian L. Gilman
Major USMC**

A paper submitted to the faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

**Signature: _____
Advisor: Colonel William Hartig, USMC**

(13 February 2006)

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE FEB 2006		2. REPORT TYPE		3. DATES COVERED 00-00-2006 to 00-00-2006	
4. TITLE AND SUBTITLE Distributed Operations: Translating Tactical Capabilities into Operational Effects				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval War College,Newport,RI,02841				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES The original document contains color images.					
14. ABSTRACT see report					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 29	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Abstract

The Marine Corps Concept for Distributed Operations (D.O.) builds on the concepts of Operational Maneuver from the Sea and Ship to Objective Maneuver. It envisions dispersing highly-capable, networked, tactical units across the battlespace to maximize the Joint Force Commander's operational reach and the effects of Joint Fires through the generation of operations driven by timely, persistent, actionable intelligence. Distributed operations will enhance the Joint Force Commander's ability to leverage operational intelligence, maneuver and fires in a manner that optimizes the effects of the operational factors of Force, Time and Space. This will enable the Joint Force Commander to translate the tactical capabilities provided by D.O. into operational effects. A historical case highlighting the British 22nd Special Air Service Regiment's distributed operations in the Falklands/Malvinas Conflict is used to illustrate how this can be achieved. Finally, obstacles to employing D.O. in a Joint Environment are identified and recommendations for overcoming these obstacles are provided.

Table of Contents

Introduction	1
Operational Maneuver From the Sea and Distributed Operations	2
Distributed Operations' Influence on Operational Art	4
Translating Tactical Capabilities into Operational Effects: A Case Study	8
Opposing View	12
Conclusion and Recommendations	14
Enclosure (1) – Distributed Operations Enablers	18
Enclosure (2) – Argentine Critical Factors and Center of Gravity Analysis	20
Endnotes	21
Bibliography	23

Introduction

“Achieving strategic objectives may not call for large-scale operations but rather many distributed operations unified by common purpose. The Joint Force conducts distributed operations to match its strengths against the adversary’s critical vulnerabilities. The future Joint Force will be capable of conducting and supporting distributed non-linear operations in a singular battlespace.”¹

On 25 April 2005, General Michael W. Hagee, 33rd Commandant of the Marine Corps, formally introduced the Marine Corps Concept for Distributed Operations (D.O.). The D.O. concept was borne out of a formal Marine Corps examination of ways that the Marine Corps could “...meet some of the critical capability gaps of the combatant commanders, particularly gaps in actionable intelligence and the ability to apply tailored combat power....”² In November 2004, the Marine Corps Warfighting Lab (MCWL) initiated an ongoing experimentation plan, dubbed Sea Viking 06, which has focused on experimentation of the D.O. concept at the Marine squad and platoon level with the ultimate goal of implementing the concept as an infantry battalion capability in early 2007.

Much has been written on distributed operations since the concept was first introduced. While most of the authors have focused on considerations for experimentation and implementation of D.O., two General Officers and the Director of the MCWL Sea Viking Division have commented that D.O. will provide operational-level commanders an operational-level capability.³ There is a void in the D.O. literature, however, on *how* D.O. will provide the Joint Force Commander (JFC) a capability relevant at the operational level of war. While one author recognized this “conceptual void”, nothing has been written on how this will be achieved.⁴ This paper is intended to begin filling that conceptual void.

As the existing D.O. literature points out and as will be demonstrated below, D.O. is not a new concept. Many armies throughout history have employed D.O., although not under

the title of distributed operations. Significant advances in technology and new ways of thinking brought on by Department of Defense efforts to transform have, however, created the right conditions to enable conventional ground forces to utilize this tactical capability to achieve operational level effects. The Marine Corps Distributed Operations Concept, when implemented, will directly support Operational Maneuver from the Sea (OMFTS) and enable the Joint Force Commander to achieve operational effects through the employment of superbly-trained and equipped, conventional, small units. The manner in which D.O. will significantly enhance key joint operational functions and optimize the effects of the operational factors of Force, Time and Space will enable the JFC to translate the tactical capabilities provided by D.O. into operational effects.

Operational Maneuver from the Sea and Distributed Operations

The Marine Corps' approach to expeditionary warfare at the operational level of war is Operational Maneuver from the Sea (OMFTS). This overarching operational concept seeks to exploit adversary critical vulnerabilities in order to bypass his strengths and decisively defeat his center of gravity. Capitalizing on technological enhancements in Command and Control (C2), Intelligence, Surveillance and Reconnaissance (ISR), logistics and long-range precision weapons, OMFTS seeks to exploit the sea as a safe haven from enemy detection and targeting, a base for C2 and logistics operations, and as maneuver space to gain a positional and temporal advantage over the enemy.⁵ Ship to Objective Maneuver (STOM) is a forcible entry application of OMFTS that further leverages improvements in C2 capabilities and the enhanced mobility provided by the MV-22 Osprey and the Expeditionary Fighting Vehicle. As opposed to conventional amphibious operations where ground forces conduct an amphibious assault followed by the establishment and buildup of a lodgment

prior to maneuvering against operational objectives, STOM seeks to maneuver combat forces from a sea base, bypassing enemy forward defenses, directly to operational objectives.⁶

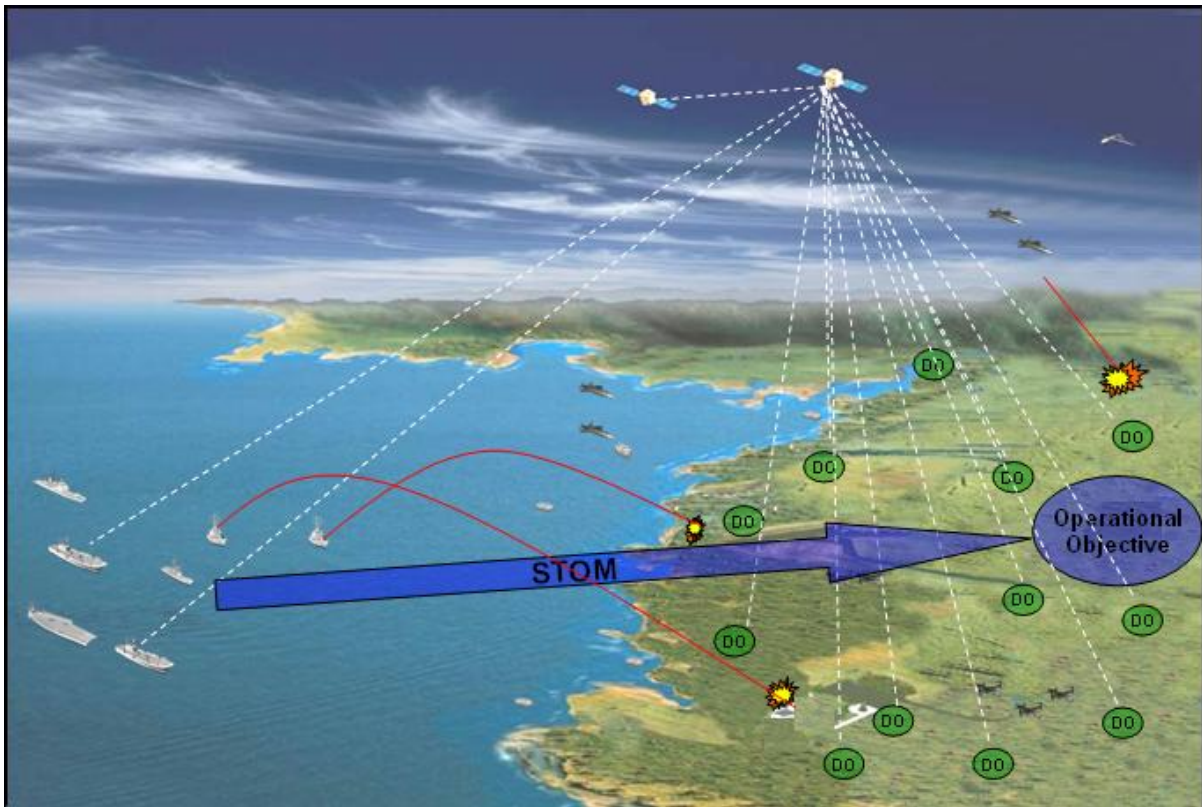


Figure 1: Graphic Conceptualization of STOM and D.O.⁷

Distributed operations builds on these operational concepts and further complicates the enemy's dilemma created by OMFTS and STOM through the employment of dispersed tactical units “across the depth and breadth of the nonlinear battlespace, in order to achieve favorable intelligence-driven engagements consistent with the Joint Force Commander’s overall plan.”⁸ It envisions dispersing superbly-trained and equipped tactical units across the battlespace that are connected via an over-the-horizon, on-the-move (OTH/OM) Command and Control (C2) network and that are supported by highly-responsive Marine Air-Ground Task Force (MAGTF) and Joint Fires. While these forces will be capable of operating clandestinely, they will not do so exclusively. More often than not, they will operate overtly,

relying on organic vehicles and MAGTF aviation that will enable distributed forces to re-aggregate, or mass, to conduct conventional ground component tasks as the situation dictates.⁹

Distributed operations will be implemented in the Marine Corps as an “additive capability”; that is, D.O. will not drastically change how infantry units are organized or fight.¹⁰ Rather, D.O. will provide an additional capability that the JFC can leverage to accomplish the mission. The key enablers for this capability are, in order of importance, education, training and technology. (For a detailed discussion of these enablers, see Enclosure (1).) Enhanced education will provide small-unit leaders (fire team, squad and platoon leaders) with the decision-making skills required to effectively lead a D.O. force that is separated from its higher headquarters. Training will focus on building “brilliance at the basics”¹¹ of a finite set of individual skills and the mastery of advanced collective tasks such as reconnaissance patrolling and conducting raids. Technology will aid the application of tactical skills, speed decision-making, enhance coordinated action, and enable the precise application of firepower.¹²

Distributed Operations’ Influence on Operational Art

Distributed operations will provide the JFC with capabilities that enhance the application of Operational Art thereby improving the ability to rapidly achieve assigned objectives. First, it will optimize the effects that the operational factors of Force, Time and Space impose on Joint Force operations. Second, distributed operations will improve the JFC’s ability to leverage the Operational Functions of intelligence, fires, and maneuver against an adversary.

Distributed Operations and Time, Space and Force

The employment of distributed operations will expand the JFC's area of influence by enabling him to influence more space with fewer forces.¹³ By dispersing D.O. capable forces across the battlespace, the JFC's ability to collect information as well as locate and target high-payoff targets (HPTs) is greatly increased. The D.O. capable force's ability to disperse and re-aggregate as required will enable the JFC to identify and dominate decisive points more efficiently than could be accomplished with conventional forces.

Distributed operations will enhance the ability of the JFC to set and maintain a tempo of operations that the enemy cannot cope with. By "redistributing decisionmaking" through the employment of a D.O. capable force that shares a common situational awareness and is enabled to make quick decisions based on commander's intent, the JFC will better be able to create and exploit opportunities while simultaneously creating dilemmas for the enemy.¹⁴ By continually driving the tempo of operations through decentralized execution enabled by distributed operations, the JFC will push the enemy decision cycle beyond its ability to cope and destroy the enemy's cohesion. With the JFC fully in control of ground operations tempo, the Joint Force ability to psychologically dislocate the enemy commander by continually disrupting his decision cycle will allow the JFC to impose his will at the time and the place of his choosing.

The employment of D.O. capable ground forces will increase the ability of the JFC to target and attack the enemy ground forces while reducing the enemy's ability to target and attack the Joint Force land component. Distributed forces that are capable of massing the effects of joint fires without presenting a massed target themselves will frustrate the enemy's ability to target them, reducing the Joint Force's exposure and vulnerabilities. Additionally, the physical and electronic signature created by numerous dispersed D.O. units across the

battlespace will confuse the enemy and cause him to hesitate while he tries to discern the distributed force's disposition, focus of effort and intent. The enemy's hesitation will prolong his decision cycle until it is too late to take effective counter-action against the Joint Force. Furthermore, the ability of D.O. forces to pull conventional forces through gaps will enable the JFC to delay the decision on where the focus of effort will be, further complicating the enemy's ability to take timely, effective counter-action.¹⁵ Finally, the inability of the enemy to discern an understandable pattern of operations may cause him to mass his forces. By doing so, the enemy will expose those forces to the effects of precision fires delivered by the D.O. force. When the enemy disperses to protect his forces from the effects of these precision fires, he then exposes his forces to the combined arms fires of the D.O. force when it re-aggregates.¹⁶ In this manner, the employment of D.O. forces can cripple the enemy's ability to make timely decisions that effectively counteract the Joint Force's actions, leading to successive enemy reactions that expose compounding vulnerabilities which the Joint Force can decisively exploit.

Distributed Operations and the Operational Functions

The employment of D.O. forces will enhance the JFC's ability to collect timely, actionable intelligence. While intelligence collection will likely not be the D.O. force's primary mission, every D.O. unit distributed across the battlespace will be an intelligence collector that is specifically trained and equipped to collect and report timely, actionable intelligence. Unlike conventional units, the individuals in the D.O. force will be specifically trained as intelligence collectors. The OTH/OM communications capability resident in the D.O. force will vastly improve the reporting and dissemination of information by enabling the distributed force to report over greater distances more reliably. Furthermore, the D.O.

force will provide *persistent* intelligence. The D.O. force's enhanced organic firepower and ability to re-aggregate as required enables the D.O. force to operate overtly and remain oriented on an area of interest for an extended period, establishing a level of situational awareness that conventional reconnaissance forces cannot provide.¹⁷

In addition to enhancing the JFC's ability to collect intelligence, the D.O. force will improve the JFC's ability to *act* on intelligence. In the D.O. force, the capability to conduct terminal attack control is resident at a much lower echelon than in conventional forces. Because this capability is resident at a lower echelon in the distributed force, not only will the JFC have more sensors operating across the battlespace, these sensors will also be terminal attack controllers. This will shorten the sensor to shooter loop, drastically improving the JFC's ability to deliver the decisive effects of Joint Fires on fleeting HPTs. This will enable the JFC to exploit opportunities that could not be exploited through the employment of conventional, non-distributed forces.

The increased ability of the JFC to leverage intelligence and fires creates concomitant opportunities for operational maneuver. By rapidly identifying areas that the enemy is neglecting or where the enemy force is relatively weaker, the D.O. force enables the JFC to pull his forces through these gaps, exploiting them through rapid maneuver. This is known as reconnaissance pull. Alternately, when gaps are not readily apparent, the JFC can leverage the ability of the D.O. force to deliver lethal fires in order to neutralize or destroy enemy capabilities and, as a result, create gaps that can be subsequently exploited through operational maneuver.¹⁸ By pulling the land component through the enemy's gaps, attacking key enemy surfaces and complicating the enemy's ability to identify the Joint Force's focus

of effort, distributed operations enables Joint Forcible Entry Operations and subsequent JFLCC operations inland.

Translating Tactical Capabilities into Operational Effects: A Case Study

As explained above, D.O. capable forces provide the JFC with an enhanced ability to generate persistent, timely intelligence that generates superior situational awareness across the force and enables him to take decisive action through operational maneuver and the precise application of joint fires. A historical example that demonstrates how a D.O. force translated its tactical capabilities into operational effects is found in the British 22nd Special Air Service Regiment's actions in the Falklands/Malvinas Conflict of 1982.

Setting the Stage



Figure 2: Falkland Islands Map¹⁹

After the Argentine army invaded the Falkland Islands on 2 April 1982, Major General Mario Menendez, the Argentine commander, concentrated the majority of his forces

on East Falkland and established smaller detachments on West Falkland and on South Georgia, an outlying island located approximately 1000 miles southeast of the main Falkland Islands. Menendez organized his main defensive positions around Port Stanley and Goose Green, while he established strong outposts throughout the islands at points where he thought the British would land in an attempt to retake the islands. Once the British attacked, Menendez planned to maneuver reinforcements from Port Stanley, using a fleet of heavy and medium lift helicopters, into positions to defeat the British landing force. The operational mobility provided by these helicopters was an essential component to the Argentine defensive plan. As such, Menendez moved them daily and camouflaged them on the ground to protect them from British attack.²⁰ The Argentine plan also called for intense air attacks against the British ground troops and naval shipping. The majority of the air support would be provided by attack aircraft forward deployed on the islands. Neutralizing these Argentine air forces was, therefore, of major concern to British planners.²¹

The British responded to the Argentine invasion by deploying a joint task force to retake the Falklands. Because the British had almost no information on the composition, disposition, activities or intent of the Argentine forces on the islands, the assault would be preceded by Special Air Service (SAS) advance force operations to gather this information and interdict high value targets as they were identified.²² The operations undertaken by the SAS in this conflict were, in essence, distributed operations. Well equipped, superbly-trained SAS units, ranging in size from special reconnaissance teams to troops, were distributed across the Falkland Islands and South Georgia to gain critical intelligence on the battlespace and the Argentine forces. When the intelligence developed by these forces presented opportunities for decisive action, the SAS massed its forces, or the effects of joint fires, to

attack HPTs and control decisive points. As demonstrated below, these actions achieved operational effects for the British Task Force.

SAS Distributed Operations

In concert with the Task Force Commander's plan, the SAS inserted eight patrols from G Squadron onto the Falklands between 30 April and 2 May. Because virtually nothing was known about the Argentine positions on the islands, the SAS distributed the patrols across East and West Falkland to conduct reconnaissance and surveillance near all the main population centers in order to determine the disposition, composition and activities of the enemy forces.²³ Over the next six weeks, the patrols remained undetected by Argentine forces while they reported critical intelligence and raised havoc with the enemy's defensive plan.

The SAS patrols provided the British Task Force with timely, persistent intelligence reporting that painted an accurate picture of the enemy's defensive scheme. They identified the main Argentine headquarters at Port Stanley, the location and disposition of numerous enemy outposts, the enemy's main defensive position at Darwin/Goose Green and the *absence* of enemy positions in two key positions: the planned British landing site at San Carlos and the high ground surrounding Port Stanley.²⁴ The SAS' superior mobility and rapid decision-making, hallmarks of a D.O. force, enabled the distributed SAS force to mass and seize Mount Kent, key terrain dominating the Argentine positions around Port Stanley that the Argentines had failed to occupy. The SAS held it for four days against repeated Argentine attacks until conventional British forces relieved the SAS position.²⁵ The SAS' ability to mass and conduct conventional ground operations for an extended duration, as they did on Mount Kent, demonstrates a key capability of a D.O. force. From Mount Kent's

dominant position, the Argentines could have delivered high volumes of effective fire against the British as they approached Port Stanley had the SAS not secured it as they did.²⁶

More importantly, SAS distributed operations destroyed two key components of the Argentine plan to defend the islands: operational mobility and offensive air power. In the first case, a four-man G Squadron patrol tracked General Menendez's helicopters around East Falkland for twenty-six days. After two failed attempts to direct air strikes against the helicopters, the patrol finally succeeded in destroying the majority of the helicopters with a naval air strike on 20 May. The patrol's destruction of the helicopters stripped the Argentines of operational mobility, eliminated their ability to counter-attack the main British landings at San Carlos with reinforcements from their main positions at Port Stanley or Goose Green²⁷ and demonstrates how a D.O. force can be employed to mass the effects of Joint Fires to destroy a HPT.

In the second case, a patrol from D Squadron inserted onto Pebble Island on 11 May located eleven Argentine Pucara ground attack aircraft. Over the next four days the patrol produced detailed reporting on the enemy disposition at the airfield. The intelligence provided by the D Squadron patrol enabled the remainder of the squadron to mass and conduct a raid on 14 May that destroyed all of the aircraft and stripped the Argentines of one third of their available ground attack aircraft.²⁸ This is an excellent example of how a small, D.O. element can cue the re-aggregation of the D.O. force to mass the effects of maneuver and organic fires in order to destroy a HPT.

Operational Effects

The SAS' operations in the Falklands aptly demonstrate how the employment of distributed operations can translate tactical capabilities into operational effects. "The single

most important strategic [*sic*] weakness facing planners was the lack of intelligence on Argentine forces.”²⁹ The distributed SAS forces produced timely, actionable, persistent intelligence on the Argentine defensive positions throughout the islands that was used extensively to develop the plan for the British land operations.³⁰ Equally important, they identified areas that the Argentine forces did not occupy, enabling the British land force to exploit these areas in their amphibious assault and approach marches in a classic example of reconnaissance pull.³¹

Additionally, the distributed SAS forces provided timely targeting information on HPTs, such as the Argentine troop lift helicopters and Pucara ground attack aircraft. The unique capabilities of the SAS, such as their over-the-horizon communications capabilities, ability to terminally control attack aircraft, mass the effects of Joint Fires and re-aggregate to conduct conventional attacks and raids, enabled the SAS to immediately interdict these HPTs and expose critical vulnerabilities in the Argentine defensive plan. These critical vulnerabilities, once exploited by the British, led directly to the defeat of Argentina’s operational center of gravity: the III and X Brigades defending at Darwin/Goose Green and Port Stanley.³² (See Enclosure (2) for an analysis of Argentina’s critical factors and centers of gravity in the Falklands War.) U.S. distributed operations will leverage the same unique capabilities that the SAS demonstrated in the Falklands to achieve operational effects for the JFC.

Opposing View

Operational Art theorists may argue that the effects achieved by the D.O. force are tactical, rather than operational. They will point out that the intelligence generated by the D.O. force is tactical intelligence because it deals primarily with the physical, tangible

aspects of the enemy force in a limited region of the battlespace.³³ They will argue that *operational* intelligence relates to “all aspects of the situation in a given theater of operations plus adjacent areas of interest.”³⁴ These theorists will also argue that the fires employed by the D.O. force are tactical rather than operational, because these fires should be considered Close Air Support (CAS), which are tactical fires that support “...forces in direct contact with the enemy...are planned and conducted by tactical commanders. ...They are aimed to hit targets in the *tactical depth* of the enemy’s or one’s own defenses.”³⁵ They will argue that in order for fires to be considered operational, they must be planned by an operational commander, intended to shape the battlespace and achieve operational objectives.³⁶

While an understanding of the differences between intelligence and fires at the operational and tactical levels of war is very important, a strict, narrow adherence to the definitions offered above that discounts any ‘gray areas’ between the two ignores the potential for tactical actions to achieve operational or strategic *effects*. Furthermore, this argument fails to recognize that D.O. forces can be *employed* at the operational level of war deliberately to achieve operational effects. The essence of operational art is synchronizing tactical actions to achieve operational effects. As demonstrated above, distributed operations provide the JFC an enhanced ability to do exactly this.

Although the information collected and reported by the front line D.O. units may be tactical within the strict context outlined above, when the JFC intelligence staff analyzes that tactical information and identifies enemy operational critical vulnerabilities that the JFC can rapidly exploit through operational maneuver or fires, the tactical intelligence provided by D.O. units has achieved operational effects. Furthermore, as demonstrated by the Falklands case study above, when the JFC employs distributed operations specifically to locate, fix and

neutralize operational-level HPTs, the intelligence provided by the D.O. force that locates those HPTs and exposes them to effective targeting has produced operational effects. Finally, because Distributed operations will enable the JFC to distribute networked forces persistently across an expanded battlespace, the combined effects of D.O. intelligence collection will greatly enhance the generation of actionable intelligence. While the intelligence provided by any of the D.O. units in and of itself is tactical, the fusion of all of the intelligence gathered and reported by the D.O. units spread across the battlespace will provide the JFC enhanced situational awareness that can be exploited to achieve operational effects.

Furthermore, although theorists are technically correct in arguing that the employment of CAS is considered tactical fires, when a D.O. unit employs CAS to neutralize or destroy an operational-level HPT that directly contributes to the defeat or destruction of the enemy's operational center of gravity, those tactical fires have achieved operational *effects*. The SAS' destruction of Argentine helicopters through the employment of CAS achieved just such an operational effect in the Falklands War. Furthermore, due to the unique capabilities of the D.O. force to conduct OTH/OM communications, operate in a distributed manner across extended ranges and conduct terminal attack control, the capabilities of the D.O. force expand beyond CAS to an interdiction capability that can be planned and executed at an *operational* depth to shape the battlespace. These capabilities provide the JFC with an additional tool to locate, fix and deliver effective fires on operational-level HPTs throughout the battlespace.

Conclusions and Recommendations

Distributed operations provide the JFC with an additional tool to accomplish the assigned mission. Distributed operations are not, however, a panacea. The employment of distributed operations will not be appropriate for every situation the JFC encounters. There will be situations where the threat to a distributed force exceeds the potential gain of employing the force in a distributed manner. In fact, initial experimentation conducted by the MCWL has identified that the employment of D.O. may not be appropriate in urban environments or in situations where the enemy is capable of locally massing more combat power than the D.O. unit can generate. As with all other operations, the JFC will need to make a calculated risk assessment before committing the D.O. force to a given situation.³⁷ The successful employment of distributed operations, like all other operations, will depend on the hard work of planners and the sound judgment of commanders.

There are several obstacles that must be overcome before distributed operations can be successfully employed in a Joint environment. First, the Joint Force Commander and his staff must understand distributed operations, what it can and cannot achieve, and the considerations for employment of a distributed operations force. The experimentation being conducted by the MCWL will identify the employment considerations for, and the limitations of, distributed operations. The proponent of the concept, the Marine Corps, must begin educating current and future Joint Force Commanders on D.O. capabilities and limitations now. This may be accomplished in two ways. First, the Marine Corps should provide education on the subject at the various War Colleges in order to expose future Joint Staff Officers and Joint Force Commanders to the concept now. Second, the Marine Corps should work with Joint Forces Command to integrate the concept into joint war games to familiarize the joint community with the concept's capabilities, employment considerations and

limitations. Possessing the capabilities provided by distributed operations is useless unless the Joint Force Commander understands what it can do for him and leverages the required resources to support it.

Another obstacle is the issue of trust. In order for D.O. to work, the JFC and all his subordinate commanders will have to empower their small-unit leaders to make quick, bold decisions in the heat of battle. Commanders at all levels will have to trust that their lieutenants and non-commissioned officers are capable of understanding the commander's intent and taking decisive action, without first asking for authorization, to achieve the desired end state. While a commander's trust in subordinates will be partially enabled by his confidence in the training his subordinates have completed, it will also be highly dependant on the culture of his service and unit. Although the Marine Corps has acknowledged this requirement and has taken great strides to push authority down the chain of command,³⁸ the level of trust given to small unit leaders still remains largely dependant on the command climate of specific Marine units. Despite this inconsistency among units, the Marine Corps as a whole emphasizes, trains, and practices decentralized execution better than any of the other services. In order for D.O. to be employed by the Joint Force, all elements of the force will have to develop and adopt this critically important mindset.

A third obstacle that must be overcome is the ability of the tactical commander employing D.O. forces to leverage the support of Joint Fires in a joint environment where there will always be competing priorities for the use of limited resources. The experimentation conducted by the MCWL has identified that distributed forces will be heavily reliant on air-delivered fires because currently there is only limited ground-based fire support capable of supporting the distributed operations concept.³⁹ This requirement for air-

delivered fires can potentially outstrip the ability of the land component to provide them organically, thus making the D.O. force reliant on other functional components' joint fires capability. While educating current and future Joint Force Commanders on the capabilities D.O. can provide will go a long way in getting resources allocated to support the D.O. force, the Marine Corps must develop and field a ground-based fire support system that can adequately support distributed operations and reduce the reliance of D.O. forces on air-delivered fires.

Two other obstacles that must be overcome before D.O. can effectively be employed by the Joint Force are related to information management and battlespace geometry. The volume of information reported to the Joint Force Headquarters will be significantly increased by the employment of a D.O. force. Information management procedures and technology will need to be developed to filter, process and analyze the increased volume of data produced by the D.O. force. Additionally, the conventional coordination measures that govern battlespace geometry will need to be reviewed in light of distributed operations. How will the employment of distributed forces across vast distances affect how the Joint Force organizes the battlespace? How can D.O. be leveraged so it complements the Joint Force Air Component Commander's ability to conduct interdiction and deep fires rather than interfere with them? While both of these issues are beyond the scope of this paper, they warrant further thought and experimentation.

Finally, the Marine Corps must determine how a Corps-wide D.O. capability will affect the employment of Marine reconnaissance units. Many of the capabilities inherent in a D.O.-capable infantry unit overlap the capabilities of Marine reconnaissance. The Marine Reconnaissance Community should lead an effort to develop employment concepts,

operating procedures and coordination measures to integrate reconnaissance operations with distributed operations in a manner that maximizes the different capabilities of the two and minimizes their overlap. The amphibious and special insertion capabilities resident in Marine Reconnaissance units is a good place to start this effort. These capabilities will enable Marine Reconnaissance to infiltrate denied areas that will not be accessible to D.O.-capable infantry units. Because the Marine Corps' effort to transform the D.O. concept into an operational capability is a "fast-moving train,"⁴⁰ the Marine Reconnaissance Community must articulate its operational relevance in the light of distributed operations now.

Distributed operations provides the JFC with an expanded capability to achieve operational effects through the employment of superbly-trained, well equipped, tactical units that are empowered to make rapid decisions in order to create and exploit opportunities, drive up the tempo of operations, and put the enemy on the horns of dilemma. The time is now to educate the Joint Force on the capabilities and employment considerations of distributed operations and to resource the technology required to maximize those capabilities.

DISTRIBUTED OPERATIONS ENABLERS

The key enablers for distributed operations are, in order of importance, education, training and technology. Enhanced education of small-unit “Fighter-Leaders”⁴¹ (fire team, squad and platoon leaders) is the key element for building leaders who can effectively lead a D.O. force that is separated from its higher headquarters. This education focuses on effective decision-making in a chaotic, confusing, intense combat environment.⁴² The Marine Corps recognizes that D.O. forces can only be successful if they are led by self-sufficient, proficient, and capable fighter-leaders who can exercise initiative and effective decision-making skills to translate mission-type orders and commander’s intent into effective combat actions. Additionally, this education will provide these fighter-leaders with knowledge of war-fighting skills such as fire support coordination, intelligence operations, logistics and other skills that have previously been the realm of much more senior Marines.⁴³

The second key D.O. enabler, directly subordinate to education, is training in two fundamental areas: physical and mental skill. In the physical realm, training will focus on exceptional proficiency in a finite set of “Corps Skills” ranging from basic individual tasks such as rifle drills to basic collective tasks such as team movement techniques.⁴⁴ Upon mastery of these Corps Skills, the D.O. force will graduate to training on mission-specific individual and collective skills such as reconnaissance patrolling and raids. An essential capability provided by mission-specific training is the ability of **every** D.O. squad to conduct terminal attack control of joint fires.⁴⁵ Mental training will encompass training that enables **all** members of the D.O. force to make effective decisions within their sphere of influence. Rather than training the most junior leaders and followers to simply exhibit strict obedience to orders and do as they are told, Marines will be trained and empowered to exercise

initiative and constantly make effective decisions to accomplish their assigned task. By driving decision-making, in concert with commander's intent, down to this level, D.O. seeks to accelerate decision-making to a speed beyond which the enemy cannot cope.⁴⁶

The final key D.O. enabler is technology. In keeping with the Corps' view that "war is not a violent clash of two hostile, independent and irreconcilable sets of equipment",⁴⁷ technology, while important, is considered the least important of the three enablers. Technology will aid the application of tactical skills, speed decision-making, enhance coordinated action, and enable the precise application of firepower. Technology will enhance the capability and survivability of dispersed units and make the fighter-leader's job easier, but it will not surpass the primacy of his ability to make effective decisions that lead to dispersed, coordinated actions in concert with the commander's intent. D.O. technology enhancements include: networked, OTH/OM communication equipment; individual, day/night, IR and thermal optics; redundant, line-of-sight radios equipped down to the individual level; GPS navigation equipment; digital target designation equipment; enhanced firepower provided by additional crew-served weapons; and organic vehicles capable of being internally transported in the MV-22 Osprey.⁴⁸

ARGENTINE CRITICAL FACTORS AND CENTER OF GRAVITY ANALYSIS

1. Operational-level Critical Strengths (“Capabilities considered vital for the accomplishment of a given or assumed military objective.”⁴⁹):
 - a. Super Etendards armed with Exocets
 - b. Other ground-based attack aircraft (Skyhawks, Pucarás, Mirage)
 - c. Ground Forces employed at Darwin and Stanley (III and X Brigade w/ 6 infantry regiments)

2. Operational-level Critical Weaknesses (Elements, while essential, “...are grossly inadequate to perform their intended function or task.”⁵⁰):
 - a. Argentine Surface Fleet
 - b. Ground Force mobility
 - c. Training and integration of Argentine Ground Forces
 - d. Long Sea Lines Of Communication (SLOCs) & ability to re-supply forces once British are in the Area of Operations (AO)

3. Operational Centers of Gravity (“Those characteristics, capabilities, or sources of power from which a military force derives its freedom of action, physical strength, or will to fight.”⁵¹):

a. Prior to establishment of British Landing Force Ashore

Center Of Gravity	Critical Capability	Critical Requirement	Critical Vulnerability
Ground based air forces	Sink or damage British capital, transport and amphibious ships.	-Effective ISR -OCA / DCA -SEAD -Airfields & Infrastructure	-Airborne ISR -Airfields & Infrastructure

b. After establishment of British Landing Force Ashore

Center Of Gravity	Critical Capability	Critical Requirement	Critical Vulnerability
III & X Infantry Brigades defensive positions at Darwin/Goose Green and Port Stanley	Defeat attacking British ground forces	-I&W -Counter-mobility -Observable fields of fire -Pre-registered, accurate fires on dead space -Local Fire Superiority -Logistics / Sustainment -Cover & Concealment -SEAD	I&W -Inferior Fire Superiority -Long SLOCs & Logistic capacity -SEAD
	Maneuver against and counter-attack British Ground Forces	-Operational mobility (helicopters) -ISR -Security	-Operational mobility (helicopters) -ISR -Security
Ground based air forces	See above.	See above.	See above.

ENDNOTES

-
- ¹ U.S. Department of Defense, Joint Operations Concepts (Washington, DC: November 2003), 13.
- ² LtGen Edward Hanlon, Jr., “Distributed Operations: The Time is Now,” Marine Corps Gazette (July 2004): 36.
- ³ Vincent J. Goulding, Jr., “Distributed Operations: Naval Transformation Starting at the Squad Level,” Marine Corps Gazette (April 2005): 46; Hanlon: 36; and BGen Robert E. Schmidle, “Distributed Operations: From the Sea,” Marine Corps Gazette (July 2004): 37.
- ⁴ Douglas J. MacIntyre, “More on Distributed Operations,” Marine Corps Gazette (July 2005): 41.
- ⁵ Headquarters, United States Marine Corps, Operational Maneuver from the Sea: A Concept for the Projection of Naval Power Ashore (Washington, D.C., n.d.), 5-6.
- ⁶ Headquarters, United States Marine Corps, Marine Corps Concepts and Programs 2005 (Washington, DC: 2005), 26-27.
- ⁷ Marine Corps Combat Development Command, Distributed Operations Implementation Working Group DO Overview Brief (Quantico, VA: 1 March 2005), 5, <http://www.mcwl.usmc.mil/SV/SV_DO.cfm#DOIWG> [2 January 2006], modified by author.
- ⁸ Sea Viking Division, Marine Corps Warfighting Lab, Distributed Operations 2006 Capabilities and Enhancements Report (Quantico, VA: 19 January 2005), 1.
- ⁹ Vincent J. Goulding, interview by author, telephonic interview, Newport, RI, 10 January 2006.
- ¹⁰ Sea Viking Division, Questions and Answers about Distributed Operations (Quantico, VA: n.d.), 1, <<http://www.mcwl.quantico.usmc.mil/SV/DO%20FAQs%2016%20Mar%2005.pdf>> [5 January 06].
- ¹¹ Sea Viking Division, Marine Corps Warfighting Lab, Distributed Operations Limited Objective Experiment 1 After Action Report (Quantico, VA: 21 December 2005), 4.
- ¹² Ibid., 4-6, 51-63.
- ¹³ Schmidle: 38.
- ¹⁴ Ibid.
- ¹⁵ Col. Gary W. Anderson, “Infestation Tactics and Operational Maneuver From the Sea; Where Do We Go From Here?” Marine Corps Gazette (September 1997): 73.
- ¹⁶ Schmidle: 39.
- ¹⁷ Goulding interview.
- ¹⁸ Anderson: 72.
- ¹⁹ Map made using Google Earth <<http://earth.google.com/>> [7 February 2006].
- ²⁰ James Adams, Secret Armies (New York: The Atlantic Monthly Press, 1987), 185.
- ²¹ Ibid., 186, 188.
- ²² Ibid., 180.
- ²³ MajGen Michael Rose, “Advance Force Operations: The SAS,” in Linda Washington, Ten Years On, The British Army in the Falklands War (London: National Army Museum, 1992), 58.
- ²⁴ Ibid.
- ²⁵ Ibid., 59.
- ²⁶ Adams, 190.

-
- ²⁷ Ibid., 185-186.
- ²⁸ Ken Connor, The Illustrated History of the SAS (New York: Barnes and Noble Books, 2001), 176-178.
- ²⁹ Alastair Finlan, "British Special Forces in the Falklands War of 1982," Small Wars and Insurgencies 13, no. 3 (Autumn 2002): 82.
- ³⁰ Ibid.: 86.
- ³¹ Ibid.: 84.
- ³² Martin Middlebrook, Task Force: The Falklands War, 1982 (London: Penguin Books, 1987), 411-412.
- ³³ Dr. Milan N. Vego, NWC 1004: Operational Warfare (Newport, RI: Naval War College, 2000), 203.
- ³⁴ Ibid.
- ³⁵ Ibid., 239.
- ³⁶ Ibid., 239-240.
- ³⁷ John A. Wilson. and Steve Stephens, Sea Viking Division, Marine Corps Warfighting Lab, Sea Viking 2006-Distributed Operations Seminar Wargame #1 Analysis Report (Quantico, VA: 29 December 2004), 11-12.
- ³⁸ Headquarters, United States Marine Corps, A Concept for Distributed Operations (Washington, DC: 25 April 2005), II.
- ³⁹ Goulding interview.
- ⁴⁰ Ibid.
- ⁴¹ Sea Viking Division, Distributed Operations Limited Objective Experiment 1 After Action Report, 5.
- ⁴² Ibid., 5-6.
- ⁴³ Headquarters, United States Marine Corps, A Concept for Distributed Operations, V.
- ⁴⁴ Sea Viking Division, Distributed Operations Limited Objective Experiment 1 After Action Report, 6, 60-64.
- ⁴⁵ Goulding interview.
- ⁴⁶ Schmidle: 38.
- ⁴⁷ Sea Viking Division, Distributed Operations Limited Objective Experiment 1 After Action Report, 6.
- ⁴⁸ Sea Viking Division, Distributed Operations 2006 Capabilities and Enhancements Report, 3-7.
- ⁴⁹ Vego, 307.
- ⁵⁰ Ibid.
- ⁵¹ U.S. Joint Chiefs of Staff, Department of Defense Dictionary of Military and Associated Terms, Joint Publication 1-02 (Washington, DC: 12 April 2001), 80.

BIBLIOGRAPHY

- Anderson, Gary W. "Infestation Tactics and Operational Maneuver From the Sea; Where Do We Go From Here?" Marine Corps Gazette (September 1997): 70-75.
- Adams, James. Secret Armies. New York: The Atlantic Monthly Press, 1987.
- Connor, Ken. The Illustrated History of the SAS. New York: Barnes and Noble Books, 2001.
- Dobson Jr., Robert K. "The Distributed Operations Hurdles." Marine Corps Gazette (October 2004): 32-33.
- Expeditionary Force Development Center, Marine Corps Combat Development Command. Marine Corps Transformational Concepts and Seabasing. Quantico, VA: n.d. <<http://www.marad.dot.gov/NMREC/images/EFDC-BGen%Conant.pdf>>[13 January 2006].
- Finlan, Alastair. "British Special Forces and the Falklands Conflict: Twenty Years On." Defense and Security Analysis 18, no. 4 (December 2002): 319-332.
- _____. "British Special Forces in the Falklands War of 1982." Small Wars and Insurgencies 13, no. 3 (Autumn 2002): 75-96.
- Goulding, Vincent J. "Burnishing the Jewel in the Crown." Marine Corps Gazette (March 2002): 16-20.
- _____. Interview by author, 10 January 2006, Newport, RI. Telephonic interview.
- _____. "Distributed Operations: Naval Transformation Starting at the Squad Level." Marine Corps Gazette (April 2005): 46-48.
- Hanlon Jr., LtGen Edward. "Distributed Operations: The Time is Now." Marine Corps Gazette (July 2004): 36.
- Headquarters, United States Marine Corps. A Concept for Distributed Operations. Washington, DC: 25 April 2005.
- _____. Expeditionary Maneuver Warfare. Washington DC: 10 November 2001.
- _____. Marine Corps Strategy 21. Washington, DC: 3 November 2000.
- _____. Marine Corps Concepts and Programs 2005. Washington, DC: 2005.
- _____. Operational Maneuver From the Sea: A Concept for the Projection of Naval Power Ashore. Washington, DC: n.d.
- Hastings, Max and Simon Jenkins. The Battle for the Falklands. New York: W.W. Norton & Company, Inc., 1983.
- Lackey, Sue A. "Gangle: New Threats Demand Thinking Outside the Box." Sea Power (December 2004): 36-39.
- _____. "Initial Look at Distributed Operations Reveals Potential Problems." Sea Power (December 2004): 34-35.
- MacIntyre, Douglas J. "More on Distributed Operations." Marine Corps Gazette (July 2005): 41-43.

-
- Marine Corps Combat Development Command. Distributed Operations Implementation Working Group DO Overview Brief. Quantico, VA: 1 March 2005, <http://www.mcwl.usmc.mil/SV/SV_DO.cfm#DOIWG> [2 January 2006].
- Maxey, Demetrius F. "An Opinion on Distributed Operations." Marine Corps Gazette (April 2005): 43-45.
- Middlebrook, Martin. Task Force, The Falklands War, 1982. London: Penguin Books, 1987.
- Office of Force Transformation, U.S. Department of Defense. Distributed Adaptive Operations, Command and Control of Network-enabled Forces, Geographically Dispersed. <<http://www.oft.osd.mil/initiatives/wolfpac/docs/Wolf%20PAC%20Distributed%20Operations%20Fact%20Sheet.pdf>> [5 January 2006].
- Rose, Major General Michael. Advance Force Operations: The SAS in Linda Washington, Ten Years On, The British Army in the Falklands War. London: National Army Museum, 1992.
- Sea Viking Division, Marine Corps Warfighting Lab. Distributed Operations Limited Objective Experiment 1 After Action Report. Quantico, VA: 21 December 2005.
- _____. Distributed Operations 2006 Capabilities and Enhancements Report. Quantico, VA: 19 January 2005.
- _____. Sea Viking 2006—Distributed Operations Seminar Wargame #1 Assessment Report. Quantico, VA: 16 December 2004.
- _____. "Marine Air Ground Task Force Distributed Operations." Marine Corps Gazette (October 2004): 34-36
- _____. Questions and Answers about Distributed Operations. Quantico, VA: n.d. <<http://www.mcwl.quantico.usmc.mil/SV/DO%20FAQs%2016%20Mar%2005.pdf>> [5 January 2006].
- Schmidle, BGen Robert E. "Distributed Operations, From the Sea." Marine Corps Gazette (July 2004): 37-41.
- U.S. Department of Defense. Joint Operations Concepts. Washington, DC: November 2003.
- U.S. Department of the Navy. Naval Operating Concept for Joint Operations. Washington, DC: n.d.
- _____. Naval Transformation Roadmap 2003: Assured Access and Power Projection...From the Sea. Washington, DC: 2003.
- U.S. Joint Chiefs of Staff. Department of Defense Dictionary of Military and Associated Terms. Joint Publication 1-02. Washington, DC: 12 April 2001.
- Vego, Dr. Milan N. NWC 1004: Operational Warfare. Newport, RI: Naval War College, 2000.
- Wilson, John A. and Steve Stephens. Sea Viking Division, Marine Corps Warfighting Lab. Sea Viking 2006—Distributed Operations Seminar Wargame #1 Analysis Report. Quantico, VA: 29 December 2004.

Wilson, John A., Steve Stephens and Matt Robinson. Sea Viking Division, Marine Corps Warfighting Lab. Sea Viking 2006—Distributed Operations Seminar Wargame #1 Appendix and Supporting Details. Quantico, VA: 29 December 2004.